

Claims

- [c1] 1. A method for operating a vehicle having a torque producing assembly, the method comprising:
defining a maximum temperature value of the torque producing assembly;
operating the torque producing assembly at a certain speed;
monitoring a change in temperature of the torque producing assembly;
using the monitored change in temperature to ascertain the amount of time in which the maximum temperature value will be achieved; and
reducing the certain speed of the torque producing assembly when the ascertained amount of time is less than a certain value.
- [c2] 2. The method of claim 1, wherein the torque producing assembly comprises an internal combustion engine.
- [c3] 3. The method of claim 1, wherein the torque producing assembly comprises a fuel cell in combination with an output shaft.
- [c4] 4. The method of claim 1, wherein ascertaining the

amount of time in which the maximum temperature will be reached, comprises creating a temperature gradient function by use of the monitored temperature change, and using the created temperature gradient function to determine the time.

- [c5] 5. The method of claim 1, wherein ascertaining the amount of time in which the maximum temperature will be reached, comprises creating several temperature gradient functions, storing the several temperature gradient functions, selecting one of the several stored temperature gradient functions, and using the selected temperature gradient function to determine the amount of time.
- [c6] 6. The method of claim 1, wherein the torque producing assembly comprises an electric motor.
- [c7] 7. The method of claim 1, further comprising indicating when the certain speed is reduced, the indication being perceivable by a vehicle operator.
- [c8] 8. A method for operating a vehicle having a component to be regulated, the method comprising:
monitoring temperature of the component over a time period during which the component is operating;
comparing a current component temperature to a predetermined temperature;

calculating a time for the component temperature to reach the predetermined temperature, the time calculation being based on the monitored temperature and the comparison of the current temperature to the predetermined temperature; and
regulating operation of the component based on the calculated time.

- [c9] 9. The method of claim 8, wherein the component to be regulated is one of an electric motor, an internal combustion engine, a fuel cell, and a transmission.
- [c10] 10. The method of claim 8, wherein the component operates at a certain speed, and the regulation of the component operation includes reducing the certain speed of the component.
- [c11] 11. The method of claim 8, wherein the component produces a certain torque, and the regulation of the component operation includes reducing the certain torque of the component.
- [c12] 12. The method of claim 8, further comprising indicating when the operation of the component is regulated based on the calculated time, the regulation being perceivable by a vehicle operator.
- [c13] 13. The method of claim 8, further comprising calculat-

ing at least one temperature gradient based on the monitored temperature.

[c14] 14. The method of claim 13, further comprising storing the at least one temperature gradient for use in a subsequent calculation of a time for the component temperature to reach the predetermined temperature.

[c15] 15. A method for operating a vehicle having a component to be regulated, the method comprising:
determining a temperature difference between a current component temperature and a predetermined temperature;
calculating a time for the component temperature to reach the predetermined temperature, the time calculation being based on a predetermined component temperature gradient and the determined temperature difference; and
regulating operation of the component based on the calculated time.

[c16] 16. The method of claim 15, wherein the component to be regulated is one of an electric motor, an internal combustion engine, a fuel cell, and a transmission.

[c17] 17. The method of claim 15, wherein the component operates at a certain speed, and the regulation of the com-

ponent operation includes reducing the certain speed of the component.

- [c18] 18. The method of claim 15, wherein the component produces a certain torque, and the regulation of the component operation includes reducing the certain torque of the component.
- [c19] 19. The method of claim 15, further comprising indicating when the operation of the component is regulated based on the calculated time, the regulation being perceivable by a vehicle operator.
- [c20] 20. The method of claim 15, wherein the predetermined component temperature gradient is a stored function based on previous operation of the component.